·1890·
CATALOGUE
THE EAGLE
BICYCLE M'F'G·Co.
STAMFORD
CONN·
H·C·BROWN·

DIRECTIONS.

TERMS: NET CASH WITH ORDER.

All orders for parts should be addressed to the central office at STAMFORD, CONN., and must be accompanied with the CASH, as we cannot open any small accounts.

All correspondence should be plainly addressed to the Company at the Stamford office.

Orders will be filled C. O. D. when sufficient money is sent to cover the express charges both ways.

Freight and Express charges are always to be paid by the purchaser.

No charge for crates or cartage.

We cannot guarantee the safe delivery of goods. Our responsibility ceases when they are delivered at Freight depot, Express or Post Office.

No discount will be allowed *under any circumstances*, except to regular agents.

When machines are ordered incomplete, only half price will be allowed for parts not taken.

We warrant all Eagle Bicycles to be free from imperfections in material or manufacture, and will make good at any time within a year any defects in them not caused by misuse, neglect or accidents.

THE EAGLE BICYCLE MFG. CO.

74 Atlantic St., Stamford, Conn.

TL 135 .E239 E38 1975

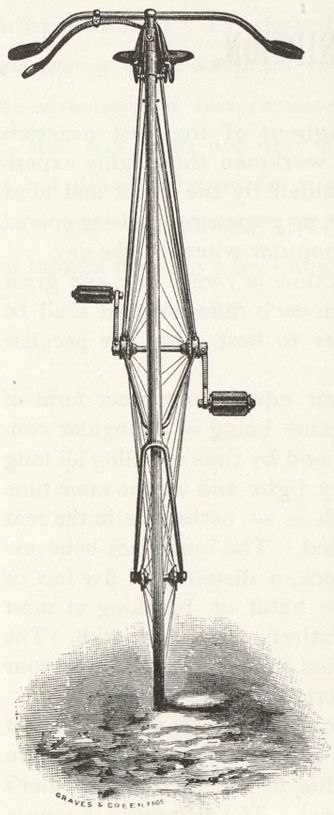
GREETING:

When any new Bicycle is put upon the market, particularly a machine wherein the principle involved is a radical departure from the existing forms, there is always more or less a feeling of suspicion regarding the new-comer, and a tendency on the part of the old and experienced riders to express adverse opinions; doubtless their honest convictions, in the majority of cases, and sometimes based on what they consider has been a fair trial of the wheel in question.

The point which they are likely to overlook, however, is this: If a rider has applied himself, and succeeded in mastering any particular form of bicycle, and has become expert in its use, he is very apt to judge another style of machine with which he is not familiar, by comparing his feeling when upon it, with his present condition upon his own machine which it perhaps took him years to acquire. THE EAGLE has had its share, and perhaps more than its share of this unjust criticism, but it stood the storm nobly, and has in its first season worked its way to the front, surprising the cycling public and even its makers by its remarkable speed, and the ease and safety with which it can be handled.

With every new make of bicycle, the machines put on the market the first season are liable to have points and details in their construction, which, when subjected to regular service show opportunities for improvements. THE EAGLE has, however, been remarkably free from all serious errors, and such faults as have been discovered

required to move a certain weight on a 54-inch wheel and the same weight on an 18-inch wheel is scarcely appreciated by the majority of riders; the obstructions and gullies over which the small wheel can be drawn only with much exertion, would be hardly noticed with the larger wheel. In the ordinary bicycle one-third or more of the weight of the rider is carried by the smaller wheel if he be seated in the usual position. While the little wheel is an important accessory to a bicycle as an aid in keeping the frame and rider in their proper place, it is obviously a great advantage to have as little weight as possible upon it. With THE EAGLE a skillful rider adjusts his saddle exactly over, or a little back of the center of the large wheel, and rides with the front wheel pressing with but a few ounces weight upon the ground. In hill climbing THE EAGLE has proved itself equal with the best. The fact of the rider's weight being on the large wheel prevents it from slipping and no power is wasted. The saddle is so arranged that by a slight movement of the hand it may be unstrung and dropped flat out of the way, allowing the rider to put all his weight upon the pedals, and giving him every freedom of movement. It is necessary, however, for a rider to understand riding this form of wheel before he can expect to accomplish the best results in hill climbing, as much depends upon the management of the pedals and little wheel.



For "coasting" THE EAGLE certainly heads the list, the position is the easiest imaginable, and is assumed by simply swinging the feet forward and crossing them on the steering rod. The powerful direct acting brake enables the rider to control the machine perfectly on the steepest hills, and to bring it to a standstill at any moment he may wish.

He is not entirely dependent upon the brake, however, for he may at any time replace his feet upon the pedals and control his machine fully in that way.

The position of the rider is rather more vertical than on other bicycles, the saddle being almost directly over the pedals. This position is by far the most graceful and is very similar to

that of walking, the body being erect from the feet up. It is well known that a propelling action of the feet while in a sitting posture is not natural, and is very injurious, as was conclusively shown during the time of the "Velocipede," therefore the nearer we can attain to a propelling action consistent with the healthful development of the muscles of the body, the more enjoyable will be the exercise and beneficial the results. Much more power can be obtained from a downward thrust than from one partially forward, and the weight of the rider is used with much greater effect in aiding to propel the machine. This has been clearly proved by the ease with which THE EAGLE can be driven up hills, after a rider has become accustomed to the manner of pedaling. No other direct crank wheel can compete with THE EAGLE in hill-climbing, and it will be found fully equal to the best clutch machines, or safties, in this respect.

The large wheel being made to run in a fixed frame, the push of the rider upon the pedals does not cause it to waver from side to side as is the case when the steering and propelling are done with the same wheel. Steering with the small wheel, when one has become accustomed to it, is much the easier, and the machine is under a better control of the rider, and is more easily and quickly handled. It can be stopped in twenty feet when running at full speed, and a 54-inch EAGLE will turn around between two lines five feet six inches apart without touching either of them. These points may oftimes be of great advantage to a rider, and the means of saving him from many an accident, besides adding greatly to the pleasure of riding. The running of THE EAGLE is very smooth and even, and it can be driven at great speed without hands.

A very interesting feature, and one which will be the source of much pleasure, is the ease with which a person may learn to ride one wheel. Before THE EAGLE has been ridden two weeks by any active rider, he will find that he has more or less control of the machine when the front wheel is raised from the ground, and that he can soon keep it raised or lower it at his pleasure, and instead of being in danger of coming off backward, he may lift the little wheel as high as twelve inches or more and replace it again on the ground, controlling the machine meanwhile entirely by the pedals, and without using the brake.

The success of THE EAGLE is owing entirely to the excellent control exerted over the machine by the positive action of the direct crank pedals. Curbs, gutters and obstacles, which would be dangerous or impassible on the "ordinary," may be ridden over or up with ease and safety. The front wheel should NEVER be allowed to strike a high obstacle to be mounted; but should be raised in time to clear it, and the large wheel can be made to follow if necessary over any object to the height that the small wheel can be thus raised.

There is no such thing as a header with THE EAGLE, if a rider cannot ride well, he may fall sideways, but never forward. In such case he has always a chance to catch himself upon one foot and save injury. A beginner may occasionally lose his balance backward, but he will land invariably on his feet behind the machine. As there is nothing whatever to catch the rider's feet after they leave the pedals, there is no possibility of a serious fall in this direction; in fact, tipping the machine backward is used as a handy mode of dismount.

The advantage of Cranks over Levers has been not only so thoroughly discussed, but so fully proved, that it is almost a waste of time and space to enlarge upon its merits. All the fastest records of the track or road have been made with the crank machines. It was considered at one time that the levers had an advantage in hill-climbing, but even this hold upon popular favor has been gradually dispelled, the same hills being climbed equally well with crank machines. The crank has for hundreds of years been acknowledged as the best means of communicating a rotary motion, and it imparts to a wheel 99 per cent. of all the power applied. If the advantages of the lever and clutch were all that is claimed for them, and their apparent gain in power by continual leverage was not counter-balanced by the extra weight and friction involved, the lever machines would long ago have outstripped the crank wheels, but such has not been the case, and the lever machine so far from proving superior to the "crank," has never yet been able to equal it; and as for its being a natural movement of the legs, a man walking with the same motion used in driving a lever machine, would not, if on the ground, move out of his tracks.

As a rule with the clutch action a rider is obliged to lift the weight of his leg after each stroke, and unless he keeps up his pedaling equal with the speed he is going, his feet will drop unsupported and all his weight will be thrown upon the saddle, a decidedly unpleasant position should he happen to strike a stone. In coasting, most clutch driven wheels depend entirely upon their brake to control them, and in case it should fail to work, the rider is left to rush helplessly down the hill and take his chances.

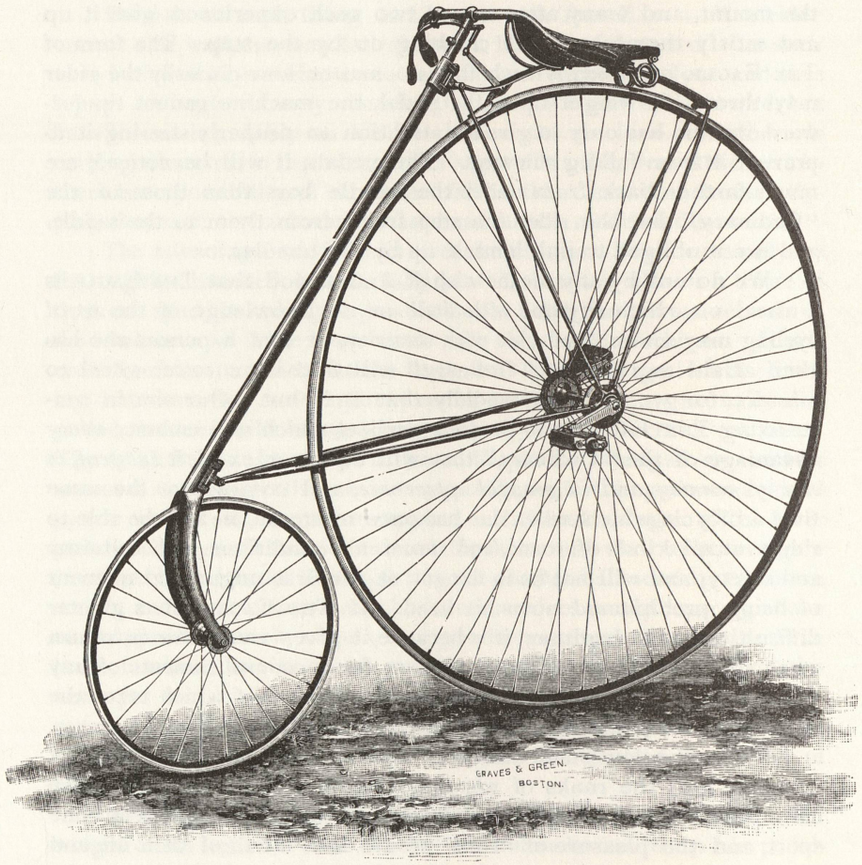
THE EAGLE is easy to mount. We do not mean by this that any person without knowing how to handle this bicycle can get at once into the saddle without any difficulty. But we do mean that when a person has once learned to ride THE EAGLE well, there is no wheel made which is more easily or quickly mounted. The fact that it has only its pedals for a step may to some seem an objection, while to others who have been accustomed to mount by the pedal, the following explanation is of course unnecessary. It is well-known that in learning the pedal mount on the "Ordinary" the greatest difficulty encountered is the danger of taking a header simultaneously with

the mount, and many after one or two such experiences give it up and satisfy themselves with climbing on by the step. The form of THE EAGLE, however, is such that no matter how clumsily the rider may throw his weight upon the pedal, the machine cannot tip forward, and he has only to give his attention to properly steering it to prevent it from falling sideways. The pedals, it will be noticed, are much farther back from under the handle bars than those of the "Ordinary," and the rider can step freely from them to the saddle, and is not obliged to pull himself up by the handles.

We do not by any means wish it understood that THE EAGLE is a wheel on which any one with little or no knowledge of the art of cycling may mount and ride with security, or that a person who has been afraid to ride the "Ordinary" will find it an easier wheel to master; for we will say candidly that it is not. Our aim in constructing THE EAGLE is to produce a wheel which will embrace every advantage of the "Ordinary," that will equal or excel it *in speed, in ease of running* and *in graceful appearance*, and combine at the same time a bicycle which, when one has once mastered, he will be able to ride over all kinds of roads, and under all conditions with certainty and safety, and will not be in danger at the first unguarded moment of being precipitated upon his head. If THE EAGLE offers greater difficulties to the beginner, it is because it gives *much more* in return when once mastered. There are very few accomplishments of any value that can be gained without practice, and that which takes the least time to learn is usually the least valuable when learned.

While the low small wheeled "Safety" has been the means of bringing into the ranks of wheelmen many who would never have attempted to ride a high wheel, it would render cycling a very tame sport, and the pleasure of "runs" would lose much of their life and interest, if they consisted only of plodding along, down low in the dust, with one's calves at the mercy of every dog that chances to rush out.

It is with the wish to aid in preventing this jump from one extreme to the other that we bring THE EAGLE into the field, combining in it the principal features which are most in demand, viz: unequaled speed; a light and rigid frame; a positive direct acting brake; absolute safety from headers; and, best of all, retain the simple, direct crank motion, without chains, levers or clutches.



THE EAGLE BICYCLE.

PRICE, $130.

For Size 50 inch. Felloe and Spokes Enameled. Balance Nickeled. Ball Bearings all around. Eagle Ball Pedals. One-Piece, hollow-tapered, Cow Horn Handle Bar, Eagle Adjustable Suspension Saddle, Tool Bag, Wrench, Oiler, &c. Weight, 44 lbs.

Price, Full Nickeled, 50 inch, $132.50.

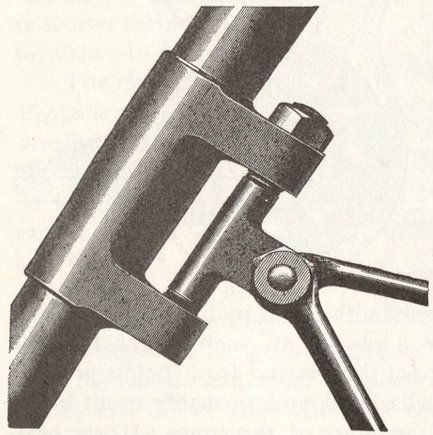
A difference of $2.50 will be made for each two inches in size up or down.

(*See page 24 for full schedule of Prices.*)

DETAILS OF PARTS.

All Parts of the Eagle Bicycle are Interchangeable. Any piece may be replaced by ordering a duplicate from the list annexed, and it will fit in its place without filing. This is a point of much importance to the cycler. No experienced rider will spend his money for a machine which, if he happen to break in some part, he must send to a repair shop to be patched up. No bicycle can be repaired and made as good as new, unless duplicate parts can be obtained, and then the cycler is his own repairer, and his tools are his screw-driver and wrench.

The Steering Rod is made of weldless steel tubing, tapered from 1¼ inches to ⅞ inches in diameter, this is firmly brazed to the drop forged fork-head, which is bored out as much as possible for lightness; the steering rod is very strong and rigid, and will stand all ordinary shocks and strains without injury.

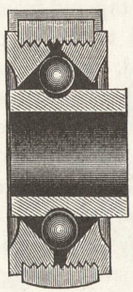


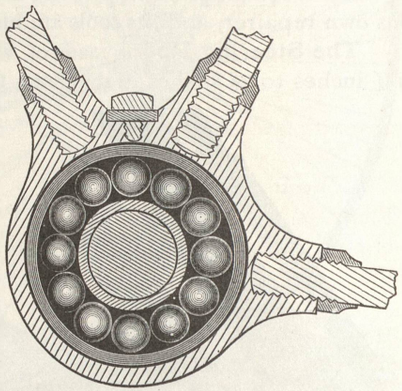
The Forks are also formed from weldless steel tubing, tapered and curved to the required shape, and rigidly brazed to the lower lugs of the fork-head, which projects well into them; they are eliptical in form and their thickness is sufficient to make them fully equal in strength to the steering rod.

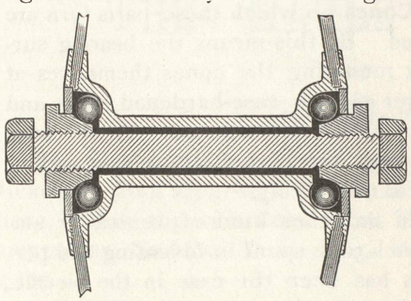
The Adjustable Steering Cones on which these parts turn are of forged steel and case-hardened. By this means the bearing surfaces are made very hard without rendering the cones themselves at all brittle. They bear at the lower ends in case-hardened steps, and at the upper in adjustable plugs, also case-hardened. These cones fit very accurately into their bearings, are perfectly noiseless, and, at the same time, allow the handles to turn freely.

The Bearings. Probably in no other kind of vehicle or machinery has there ever been as much time spent in inventing and perfecting anti-friction bearings as has been the case in the bicycle. While ease of running is essential in all conveyances, in those driven by steam or other powerful forces, the advantages of fine frictionless bearings are not so noticeable as in a machine depending solely upon the muscles of the human body for motion. In a bicycle the

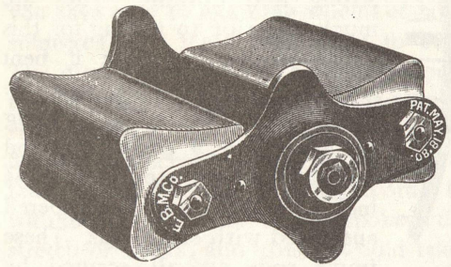
least additional friction is as quickly noticed by the experienced rider as a stiff leg would be by a pedestrian. Experience has shown that steel balls are the best medium to be placed between the metal surfaces of a bearing, and that by allowing them to roll in a circle between hardened surfaces the wear and friction is reduced to a minimum. It can easily be seen that the balls and bearing have to be very accurate in size and surface, for they must be adjusted until there is no side play, and yet run freely. The balls used in the bearings of THE EAGLE are of tool steel, drop-forged, rolled and ground. The size in the large and small wheels is 311½ thousandths of an inch diameter, and in the pedals 190½ thousandths of an inch diameter. Before being used each ball is separately tested in a micrometer gauge, and if it vary half a thousandth part of an inch in diameter, or from a perfect round, it is discarded. The sectional illustrations will show the balls, cones and method of adjusting as used in THE EAGLE. As the balls and bearing cones are tempered as hard as glass, and are adjusted until there is not a thousandth of an inch in play, it is very evident that if one ball were a $\frac{1}{1000}$ of an inch larger than the rest in a bearing, it would prevent the bearing from being properly adjusted, leaving all the other balls loose, and probably result in the breaking of the large ball, or the injury of the cones. These bearings are all made by us with the greatest care; the cones, after being hardened, are ground with an emery wheel to insure their being perfectly true, and every bearing is carefully tested before the machine is allowed to leave the factory.





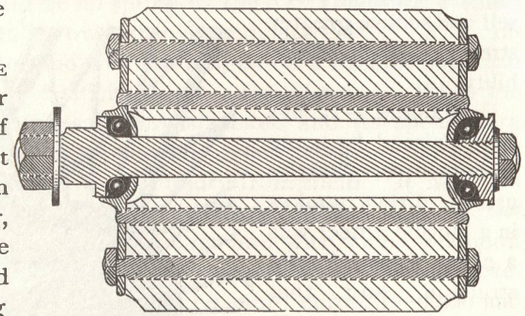


The Eagle Pedal, while it is in general form and appearance similar to the usual popular form of ball-bearing pedal, has advantages in shape and method of supporting the grip rubbers, which are entirely new, and offer a much better hold for the rider's foot. The rubber bars instead of being square are shaped as shown in cut; they are supported on two rods each, instead of one, and curved slightly to fit



the sole of the shoe. This construction gives a firm bearing to the extreme outside edge of each rubber, and at the same time preventing any possibility of their slipping or turning over. Our EAGLE pedals are all made with Bowns' Æolus Ball Bearings and patent double supported rubbers.

The Cranks are of the latest approved form, adjustable from 5 to 6 inch throw. As they are the most likely part of a wheel to be damaged in case of falls, we have used in them a quality of steel which, although tough and strong, will bend to a reasonable extent and may be straightened again without breaking. Cranks of longer or shorter throw will be furnished to order.

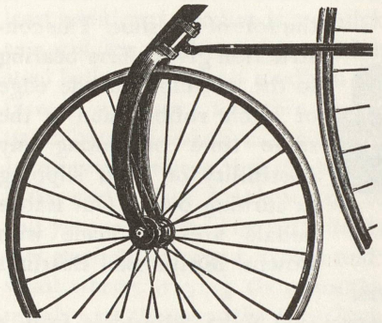


The Brake of THE EAGLE is not put on for ornament. The form of the machine is such that its sudden application cannot cause a header, and the rider may use it at will, either to hold him back when coming down steep and dangerous hills, or to bring him quickly to a stand still; the handle and lever are made of extra strength and the action is free and direct and will work equally well when the handles are turned in either direction. It is also adjustable as to contact with the wheel, and cannot wear so as to fail in action.

The Handle Bars are of one piece of weldless steel tubing tapered at each end, and curved downward and backward to a suitable position. They are secured to the steering rod in a very neat and substantial manner and cannot wear loose, yet may be detached at a moment's notice. We have carefully tried all kinds of spade handles but have found them clumsy and undesirable on a wheel so easily steered as THE EAGLE. Our handles are of an improved form and will not turn on the bars.

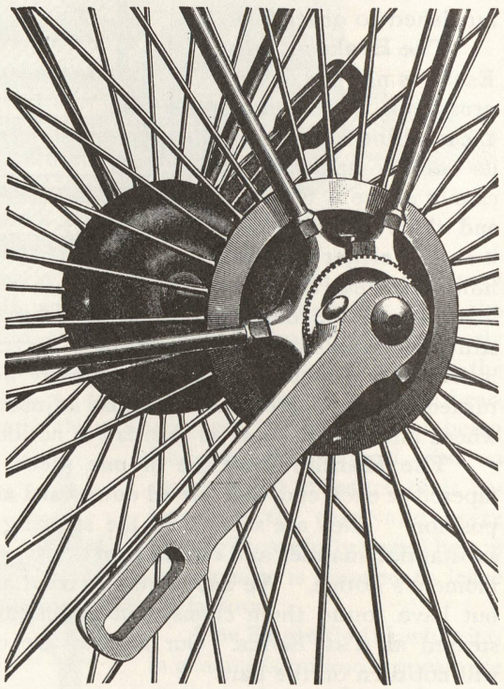
The Saddle Spring is drawn from tool steel and finely tempered. Unless otherwise ordered, it will be furnished of suitable stiffness for riders of 175 lbs., or under; when exceeding this, the weight of the rider should be given and we will supply spring accordingly.

The Frame Rods.—The four supporting the saddle-spring are cold drawn steel spring wire $\frac{5}{16}$ inch diameter, and are exceedingly



strong and durable. They are much superior to tubing for this particular purpose, for if bent they will spring back again to place. The braces supporting the lower end of the steering rod are of weldless steel tubing ⅝ inch diameter, and are tapered and fitted with solid ends. These frame rods are all secured by screw and jam nuts to the bearing case and can be separately detached if necessary.

The Bearing Case is of forged steel without temper, and made with three lugs into which the frame rods are tightly screwed and locked in place. This case is bored and tapped to receive the hardened bearing cones. In this way we avoid hardening the case itself and secure greater strength and durability.

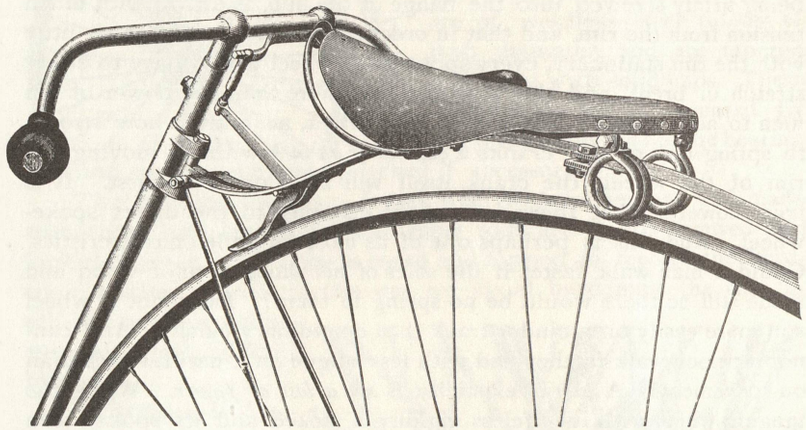


Wheels.—It has been claimed by some manufacturers, that the use of direct spokes in a bicycle wheel was a cheap form of construction, and that THEY put themselves to much greater expense in order to furnish wheels with tangent spokes; also with long scientific explanations they try to show that a wheel built with direct spokes is without rigidity, and that the cranks fail to impart full power to the wheel; in fact, to judge from such a description, one who had never seen a direct spoke-wheel would imagine that direct spokes allowed the cranks to turn about one-quarter way around before they began to operate the wheel. Such representations are absurdities. The direct spoke-wheel, when properly constructed, is the strongest and MOST DURABLE form known, and

you have only to examine wheels of both kinds after they have been subjected to a few years' wear, to be fully satisfied on this point. The direct spoke-wheel does NOT depend, by any means, ONLY upon the stiffness of its spokes to impart the power from the cranks to the rim. It must be also taken into account that each spoke, besides being firmly screwed into the flange of the hub, is drawn with much tension from the rim, and that in order to turn the hub ever so little with the rim stationary, every spoke in the wheel would have to either stretch or break, and this it would take more than the power of ten men to accomplish. We will defy any rider, no matter how strong, to spring one of our cranks a *quarter of an inch* without moving the rim of the wheel; the crank itself will bend or break first. It is true, however, that there is a slight elasticity to the direct spoke-wheel. And this is perhaps one of its most valuable characteristics. Could a man walk faster if the soles of his shoes were of wood and made stiff so there would be no spring to them? Does not a wheel run more easily on a cinder track than on ordinary earth? And cannot a person walk farther and with less fatigue on a natural path than on pavement? A *slight* elasticity is *not a loss of power.* While the tangent wheel with its lifeless rigidity is racked and its spokes torn from their nipples, the direct spoke-wheel receives equal shocks and harder usage, and shows little or no injury from them. It has often been said of some of the best makes of direct spoke bicycles, *"that they never wear out."* As for cheapness, no one with any mechanical experience can fail to see that in the construction of a direct spoke-wheel of high grade, the hub has to be more carefully made and finished, the holes for each spoke accurately drilled and tapped, the straight steel spokes butt ended and threaded to fit, and, as is the case in THE EAGLE, supplied also with nipples at the rim for ease of adjustment. This kind of construction shows for itself when compared with the quick process of slipping wires crosswise, or hair-pin style, through holes in the hub flanges and drawing them to the rim. After considerable experimenting we have adopted the solid or crescent form of felloe in preference to the hollow rim, and it will be found to give better satisfaction in this style of machine, the latter being so comparatively thin was found to indent too easily against the edges of curbs or other sharp projections. In a wheel of this character, the rider is likely to ride over obstacles and rough roads that would not be attempted on the ordinary, and as there is only a difference of about one pound between the weight of a solid or a hollow rim, we decided to give THE EAGLE the benefit of the stronger.

The Saddle is a very important item in the manufacture of a bicycle. Very often a machine which has most excellent qualities will be condemned by a rider for not being comfortable or hard riding, and the fault will likely be laid to its construction, when in reality the

saddle may be a little too wide or too narrow, or be set too high in the front or rear, for his comfort. The saddle of THE EAGLE is the result of much calculation and is designed and made particularly for this machine. It is adjustable forward or backward, and has also adjustment for tension; the forward end is so hung that it may be



dropped out of the way as a convenience in hill climbing, and snapped quickly into place again when required. The combined action of the straight and coiled springs secures all comfort possible for the rider. Almost any saddle can be used on THE EAGLE, but we believe this will give the best satisfaction.

VERTICAL POSITION.

IN RELATION TO POWER AND COMFORT.

Upon the first appearance of THE EAGLE in the early part of last season, there were many criticisms expressed regarding the position of the rider in comparison with that taken by a rider on the "Ordinary." Many claimed that with the saddle so directly over the pedals, the rider would be unable to rest with comfort upon it, and would experience fatigue upon taking a very long ride. Experience, however, has proved that this is not the case, and a close observer will note that in all the modern forms of Safeties where the construction will admit, the saddle is now placed forward directly over the pedals. The reason for the rapidly increasing popularity of the vertical position is easily explained, and its advantages over the old-fashioned sitting posture are most plainly evident.

In the first place, almost any clear-headed person will admit that if a man is going to do a certain propelling work with his feet and

legs, he will get the most power, and experience the least fatigue if he assumes in doing it, the position in which nature has intended that his legs should be used. If the center of gravity of a rider is from twenty to twenty-five degrees back of a vertical line drawn upward from the axle to which the cranks are attached (as is the case with the "Ordinary" and some of the first forms of "Safeties"), and the rider's weight be 150 lbs., he cannot possibly put more than seventy-five per cent. of his weight (about 113 lbs.), upon the pedal as a propelling power, without pulling upward upon the handles. Now a rider of the same weight seated directly over his cranks, can without pulling upon the handles, put 150 lbs. of propelling power upon his pedal, having an advantage of 37 lbs. propelling power over the former while making the same muscular exertion, and at the same time having equal resource to pull on the handles for additional power Now the power necessary to put upon the pedal of a 52-inch driving wheel, having a 6-inch crank, under the four named conditions, is as follows:

The surface of the road supposed to be fair Macadam, the weight of rider 150 lbs. and pressure recorded when the crank is in a directly forward position, speed about ten miles per hour.

Pressure on pedal for level road	50 lbs.
For grade of 1 ft. in 20	100 "
" " " 1 " " 12	150 "
" " " 1 " " 7	200 "

It will be seen that the rider in the vertical position can climb a grade up to about one foot in twelve without being obliged to pull upon his handles, while the rider in the old position is required to use this additional power about as soon as he attempts a grade steeper than one foot in twenty. Also in climbing a grade of one foot in seven the rider in a vertical position puts 150 lbs. pressure by his weight and is required to pull 50 lbs. extra with his hands; whereas, in the other case, he can only get 113 lbs. power by his weight upon the pedal, which makes it necessary to pull 87 lbs. upon the handles to get the necessary pressure. It has been asserted by some persons, that it would not be possible to pull upward upon the handle bars of THE EAGLE without lifting the front wheel off the ground. To show how absurd this theory is, we will here state that THE EAGLE machines are repeatedly ridden up grades of 1 foot in 7, and in several instances have been propelled up ascents as steep as 1 foot in 5½; thus, as the rider could not possibly put any more than his weight, say 150 lbs. upon the pedal, without pulling on the handles, and it required 200 lbs. pressure on the pedal to drive the machine up the grade, it is clearly evident that he obtained about 50 lbs. of the pressure by pulling on the handles.

We would also further state in regard to this point, that it is not

only possible to pull 50 lbs. upward upon the handles, but that a good rider on THE EAGLE can pull 150 lbs., or, in fact, all his strength, without raising the little wheel from the ground.

The next question is, is this vertical position as comfortable as that of the "Ordinary?" Let us examine the principles of both, and see. We will now consider the rider seated as in the foregoing illustrations 22½ degrees or more back from a line vertical with the axle, his weight being as before 150 lbs. We have already ascertained that the greatest portion of his weight which he can put upon the pedals in this position without help from the handles would be 113 lbs., leaving 38 lbs. as his least weight at any time upon the saddle. Therefore, the weight of the rider on the saddle in this position will vary from 38 to 150 lbs., and the same rider in a vertical position from 00 to 150 lbs. Can there be any question as to which position will the sooner cause fatigue, or render the rider saddle sore?

If there are any who do not believe these plain facts and figures, we would refer them to the testimonials of prominent racing men who have ridden their EAGLE machines a hundred miles and more a day over rough roads, and who speak in the highest terms of this position and say they never rode such distances before with so little fatigue. There is no doubt but that a person after riding for years in the old position will at first feel the change, but with a little patience and practice he will soon wonder how he endured the other so long.

A sitting posture is not a natural position for the exercise of the legs, neither is it a graceful position when we consider the work a rider is expected to be doing. Would we approve of a man trying to walk with both his feet out in front of him at the same time? Or would we admire a person who tried to run in the same position with his body inclined backward? The bicycle is nothing more or less than a walking and running machine which increases our natural powers of speed, and decreases the jar and vibration of moving over the ground.

F. B. SAWYER,
AGENT,
LITTLETON, - N. H.

THE EAGLE BICYCLE.

AND HOW TO LEARN TO RIDE IT.

Perhaps among all the forms of cycles which have been constructed during the past quarter of a century, no machine has ever been brought before the public which has offered such an unlimited opportunity for the display of the skill of an expert wheelman, and at the same time combined all the essential qualities to be looked for and desired in the bicycle of the steady rider, who requires a wheel only to carry him to and from business, or on such occasional rides as he may take for pleasure.

THE EAGLE in the hands of the experienced cycler is both bicycle and unicycle, and may be ridden at will either on two wheels or one. To those who are already competent to ride a bicycle of whatever form, the following hints will be only occasionally useful. Therefore to those who are taking their first steps into the world of cycling, we will address these first remarks.

Taking it for granted that the beginner has never before tried to ride THE EAGLE bicycle, we explain it accordingly. If part of what we describe is familiar to him, it will do no harm to freshen his memory.

THE EAGLE will be sent crated with the handle bar and pedals detached and packed with it. After taking the machine from the crate and wiping off the slush which is put on to protect the nickeled parts, the handle bar should be put in place, taking care that it is set squarely at right angles with the front wheel, and then firmly secured in place with the bolt for that purpose. The pedals are attached in the usual manner. For the beginner the saddle should be placed so that its center is about one inch forward of a perpendicular line drawn upward from the axle of the large wheel. It should then be moved back little by little as the rider becomes accustomed to the machine, until its center is directly over the axle or somewhat back of it.

THE EAGLE now being ready for use, the learner should begin by wheeling it around, taking hold of the left handle and the rear of the saddle-spring until familiar with its motion, carefully noticing the way in which the steering affects its balance.

He should then get some person, *one who is a rider, if possible*, to assist him in his first attempt. A piece of smooth road should be selected and the assistant standing on the right hand side just in front

of the handles, should take hold of the right handle with his left hand and with his right grasp the steering rod about half way down, then move the machine forward until the left pedal is down and a little back of the center, at the same time leaning the wheel towards himself. The beginner will then put his left foot on the pedal, grasp both handles, step up and take his seat on the saddle. The assistant will then, keeping him carefully on a balance, move around to the left side, and taking hold of the end of the left handle and the rear of the saddle-spring, walk by the side of the rider and help him steer the machine so as to keep it balanced. In this way any person may easily learn the art of balancing himself upon two wheels; some will acquire the motion in half an hour; others may require three or four such lessons before they are able to go alone with certainty. As the learner begins to show signs of assisting intelligently in the steering, the assistant should gradually lessen his hold upon the handle and relinquish it altogether as the rider gets the machine under his control. He should, however, still keep close at his side and be ready to steady him in case he gets confused.

As soon as the beginner can ride straight ahead or around a large circle steadily, he should then practice

Dismounting and Learning How to Fall.—The dismount is made by simply stepping from the pedal when it is at its lowest point, and may be made from either side, taking care to lift the opposite leg high enough to avoid striking the rear of the wheel. As there is no danger of a header, this dismount is very easy and does not need any further explanation. To dismount from the rear a rider should pull up quickly on the handles, at the same time throwing his weight backward, the wheel will then shoot out from under him, leaving him standing behind it still holding the handles, the little wheel in the air.

It is an excellent thing for a beginner to *learn to fall properly*, and without injury to either himself or his wheel. There are of course only two directions in which he can fall, that is, either to the right or the left. If he lose his balance to the right he should not attempt to jump from the machine or try to slide off, but the moment he finds himself going he should throw his left leg forward and around the steering rod and reach his right foot out sideways as far as possible, he will then land on both feet astride the handle bars and holding them to prevent the machine from striking the ground. Of course if he fall to the left, his right leg should be thrown around the steering rod.

The Mount will now be the next thing in order, and should not be attempted until the beginner has become somewhat familiar with the wheel, for there is no advantage in a man trying to mount a machine which he could not balance even if he were in the saddle. We therefore suppose him able to ride alone if once mounted.

Standing on the left side of the wheel he will take the left handle in his left hand and rest his right upon the rear of the saddle, then, running the machine forward quickly place his foot on the pedal just as it reaches its lowest point and step lightly to the saddle. He should keep a steady hand meanwhile upon the handle, for upon his steering, even while mounting depends his balance. It will be well to have an assistant walk on the right-hand side while the beginner is making his first attempts. Some riders prefer to hold both handles while mounting, claiming to thus keep a better control, but as we have seen as many learn well and quickly one way as the other, it is considered, therefore, only a matter of preference. The standing mount is perhaps the hardest to learn, but when once familiar with, it is the quickest and easiest way in which a cycle was ever mounted. The left pedal should be forward, a little below the height of the axle, the rider grasping both handles, places his left foot upon it and steps quickly to the saddle, taking care to *lean well forward* and keep the little wheel firmly on the ground. The moment the weight is upon the pedal, the machine will start forward and give sufficient motion to guide it until the other foot reaches the right pedal, which will then be forward ready to push. No forward motion whatever should be given from the ground when starting to make this "mount," as that would bring the left pedal to its lowest point, and the weight of the rider would impart no motion, thus, on reaching the saddle, the machine would be at a standstill, and the cranks directly on center. It will be a great help to a beginner in learning the mount to select a piece of ground with a gentle incline. A plot of smooth turf is an excellent place to practice, as a few tumbles there will not be likely to hurt either the rider or the machine. We would particularly caution the novice against making his first attempts at mounting upon a hard floor or road, without an assistant walking on the opposite side of his wheel. He should *never* attempt to step or jump off backward over the rear wheel, for he will be quite likely to catch astride it or the rear of the saddle-spring and fall flat before he could get his feet under him.

After once getting a seat on the saddle *stick to it*, and if necessary to fall, do so as before explained; but *do not on any account leave the saddle to jump or step backwards over the rear of the wheel.* Do not be in too great haste to learn the mount; get on by the aid of a fence, tree or post for a few days, and as you improve in riding and get accustomed to the machine, the mount will come to you of its own accord. A good rider of THE EAGLE has the machine under his control, and is really mounted as soon as his foot rests upon the pedal.

Hill Climbing.—It will be useless for a beginner to attempt to climb steep hills until he is competent to manage his wheel on smooth roads and level ground; then, by beginning with gradual rises

at first, and increasing the grades as the art is acquired, the rider may soon climb the steepest hills and ride over the roughest roads. In hill-climbing the more the rider puts his weight upon the pedals and less upon the saddle the better he will succeed. The saddle of THE EAGLE is so arranged that by a slight movement of the hand it can be unstrung and dropped for the convenience of expert riders.

Riding hands off, although not a necessary accomplishment, shows a thorough control of the machine, and is not difficult to learn. With THE EAGLE the steering mechanism is independent of the propulsion, and no wavering motion is imparted to the machine by the push on the pedals, the running, therefore, is smooth and even. The front wheel is so hung that any forward motion tends to prevent its turning to either side, except as the machine may lean that way. This enables an experienced rider to steer his wheel almost as well by swaying his body as with his hands.

To Ride One Wheel, it is commonly supposed that the cycler must be a trick rider or some remarkable expert, and in the past such has generally been the case. To attempt to ride one wheel with the "ordinary" was simply to invite a bad header, which such aspirants seldom failed to get. With THE EAGLE, however, the rider may amuse himself by lifting the front wheel a little at a time, and he will soon find he is able to take it up and put it down at his pleasure; the machine is steered meanwhile by motion of the body as when riding "without hands." This, although considered a trick of fancy riding, can be made of great use and pleasure. It gives the rider an excellent control of his machine, and enables him to more easily run over obstacles and to mount banks and curbs.

In Coasting, the feet should be crossed over the steering-rod. This position will be found very comfortable, and will not tire the rider. A double foot-rest is made, however, for those who prefer such a support. The feet *should never be placed over the handles.* Such a position is, to say the least, ungainly, and is also very dangerous. The brake of THE EAGLE is sufficiently powerful for the rider to fully control his wheel while coasting the steepest hills, and to bring it to a standstill at any time if necessary.

THE FOLLOWING ARE A FEW POSITIONS AND TRICKS FOR FANCY RIDING, AND SHOULD BE ATTEMPTED ONLY BY THOSE WHO HAVE A THOROUGH CONTROL OF THE MACHINE:

The Side Saddle.—When the left pedal is at its lowest, swing the right leg around the rear of the wheel, and then carry it forward between the left and the machine, taking seat on the saddle just as the pedal reaches its highest point, and continue to propel with the left foot. In case of a fall to the right while in this position the rider should throw both feet forward and around the steering rod, and if

active, can land on both feet and even prevent the machine from striking the ground.

To Ride on One Pedal, the rider should hold both handles and help lift his weight by them while the pedal is rising, allowing his full weight to bear on it while on the down stroke, keeping the body well forward, and the front wheel firm on the ground.

To Vault on from the rear, the rider stands behind the machine holding both handles, the little wheel in the air, run forward a few steps, put on the brake, and at the same time jump for the saddle, taking care to land on it and *not* on the rim of the wheel.

A very neat standing vault may also be made from the rear, holding the machine in the same position as for the above. Jump straight up, at the same time pull the machine backward and under you, this is quite easy and makes a novel mount.

A Very Effective Mount is made by taking the left pedal with the right foot, holding it for one revolution, and then vaulting from it, to astride the saddle as the pedal is rising.

To Scull, assume the coasting position, and putting as much weight as possible forward, turn the handles alternately from side to side, this, on a smooth floor will give a continued forward motion, and will also, if you are not careful, loosen the tire on the little wheel.

The Standstill.—This is accomplished with the cranks horizontal and the front wheel turned to one side the same as with the "Ordinary;" it is, however, somewhat harder to acquire upon THE EAGLE.

The side vault both standing or running is easily learned, also some fifty or more fancy positions, on the sides and front of the machine may be acquired with practice.

THE EAGLE can be ridden backwards, but it is a very difficult feat to accomplish. Also it will be found an excellent wheel for playing Polo.

Many skillful riders of the "Ordinary" find a difficulty at first in keeping the front wheel of THE EAGLE on the ground. This is due to the acquired habit of pulling backward on the handles simultaneously with the forward push of the pedal, also from having instinctively learned to throw the weight back when about to strike a sudden rise of ground. A little practice, however, will remedy this fault.

THE ART OF PEDALING.

This point is of vital consequence to the rider who wishes to do good work on an EAGLE machine. In riding any style of bicycle the advantage of good pedaling is plainly apparent; but with THE EAGLE the gain in power, speed and efficiency is so great from attaining a proper skill in handling the pedals, that its importance cannot be over estimated.

Immediately after learning to ride and mount an EAGLE wheel,

the rider should give his attention to the pedaling, and learn to do it properly. In order to accomplish this, he should first learn to keep a firm foot hold during the entire revolution, and not allow his feet to slip from his pedals. He should then practice putting as much of his weight as possible upon them; in fact, try and lift his weight entirely from the saddle. This will tire one quite quickly at first, but with a little perseverance they will soon be able to ride a considerable distance in this manner, and the knowledge will be of the greatest advantage to them on rough roads and in climbing hills. We do not expect a rider to stand all the time upon his pedals, for that is unnecessary, he may rest himself upon his saddle at every favorable piece of road, it is however the ability to depend solely upon his pedals for support, at any time, which gives him perfect control and enables him to keep a firm and steady position, while his machine is bounding over obstacles and imperfections of the road.

A little observation will show that the axle of the large wheel to which the pedals are attached is the steadiest part of the machine; that is, in riding on a very rough road or over obstacles the saddle and frame of the machine are forced suddenly backward and forward, as the small wheel mounts and rides over obstructions, the framing acting as it were upon a hinge, formed by its connection with the axle. The large wheel itself is subject only to a rise and fall in passing over the inequalities of the road, and has no rocking motion.

It is therefore evident, that when a rider stands upon his pedals, the machine may plunge and vibrate under him, while he remains perfectly upright and continnes steadily on his course.

Another feature of importance, is, the action of the ankle during the revolution of the pedal. When the pedal is at the highest point the heel should be depressed, and the pedal forced in a forward and downward direction, as much as possible by a straightening action of the ankle. As the pedal approaches its lowest point, the heel should be slightly raised and the toe depressed, this motion of the ankle will both help force the pedal over the center at the upper portion of the stroke, and under the center at the lower. This with practice will give a strong propelling force during the complete revolution, doing away entirely with dead centers.

Ankle motion cannot be learned in an hour or a day, but it is well worth practicing. It will decrease the fatigue of propelling, and greatly increase the speed of the rider, it also makes him appear more graceful upon his machine, for as the motion of the ankle is properly acquired, the action at the knee is greatly lessened, and the rider appears to ride with less exertion, as in fact he does.

HINTS ON THE CARE OF THE EAGLE BICYCLE.

Do not keep a bicycle in a damp place; remember it is made of *steel*, not wood; and steel *will rust.*

Wetting a nickel wheel will not hurt it (provided it is not salt water) if it is allowed to dry quickly; but keeping it in a damp place will ruin it.

If a part is injured or broken, send and get a duplicate, and your machine will be as good as new.

If the tire becomes loose, hold a lamp under the rim until the cement is melted, then wind a piece of cord tightly around tire and rim at the loosened place, and let it stand an hour or more. Do not wait until your tire comes half off, but secure it as soon as you see a place loose.

Do not wait for your wheel to squeak; oil it little and often.

If you fall and bend a crank, it may be easily straightened by removing the pedal and bending it back with the aid of a large wrench; it is not necessary to take the crank from the axle.

How to True a Wheel.—If you have no mechanical genius do not try it; it will be cheaper to send it to the factory. However, if you do attempt it, it should be done as follows: Turn the machine up side down,so that it will rest on the handle-bar and saddle; whirl the wheel to be trued around rapidly, and, resting the hand firmly against the steering-rod, hold a piece of chalk on one side of the rim, so that only the part which wavers that way will rub against it; this will mark the rim in whatever places it is out of true on that side. Then, stopping the wheel, carefully examine the chalk marks, and with a nipple-grip turn the nipple of each spoke which comes from the *opposite* side of the wheel within the radius of the chalk mark, a little to the right, as looking toward the hub. Then erase the chalk marks and proceed as before, chalking alternately each side of the wheel until it runs true Do not give more than a quarter turn to a nipple at one time, and if the spoke is already tighter than the rest, turn the opposite one next to it a little to the left; this will have the same effect and not get the spokes too tight.

Keep the steering cones adjusted so they will not rattle, but not tight enough to prevent the little wheel from swinging easily to and fro. It is a mistake to think you can ride straighter by having the handle turn stiffly. It is just the reverse, and you cannot ride "without hands" at all unless they work very freely.

Do not use any balls in the bearings of The Eagle, excepting those we furnish for it. They will be exactly the right size. Should you get balls a thousandth of an inch larger they will injure the bearing; if as much smaller they will be of no use in it.

Keep the spokes of your wheel tight. Nothing will damage a wheel more than to allow some of them to get loose and stay so; be careful, however, not to draw them tighter than the rest, or you will throw the wheel out of true.

PRICE LIST

—OF THE—

EAGLE BICYCLE.

Diameter of Large Wheel.	A Finish.	B Finish.	C Finish.	Diameter of Small Wheel.	Leg Measure.
46 inch.	$127.50	$125.00		20 inch.	31 inch.
48 inch.	130.00	127.50	$125.00	20 inch.	32 inch.
50 inch.	132.50	130.00	127.50	20 inch.	33 inch.
52 inch.	135.00	132.50	130.00	22 inch.	34 inch.
54 inch.	137.50	135.00	132.50	22 inch.	35 inch.
56 inch.	140.00	137.50	135.00	22 inch.	36 inch.

STYLES OF FINISH.

A—Full nickel, every part including felloes.

B—Spoke and felloe enameled, balance nickeled.

C—Spokes, felloe and frame enameled, trimmings nickeled.

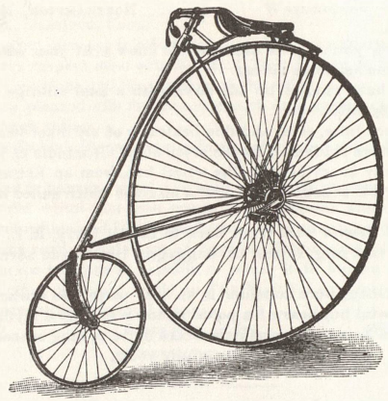
In taking the length of the leg, measure from the crotch to the ground, the leg being held straight. A rider on THE EAGLE does better work on a wheel well within his reach, and should use as small a machine as he can ride comfortably rather than try to reach a large wheel. He should be able, when sittting square in the saddle, to press the *hollow* of the foot firmly on the pedal during the whole revolution of the crank.

NICKEL PLATING.

All parts finished in nickel are first finely polished and well coated with copper, then covered with an extra thick deposit of pure nickel, and well buffed. We take much pains with this finish, and our full nickeled machines present a very fine appearance. We can recommend them for elegant appearance, and also for durability, if they are given reasonable attention.

Our B finish makes a very neat and handsome "mount.' While for those who prefer enamel, our Style C, aside from the nickeled trimmings, has every part finely enameled.

Each of the above finishes will be kept in stock ready for immediate delivery.



THE "EAGLE" BICYCLE.

THE LIGHTEST RUNNING WHEEL IN THE WORLD.

SAFETY, SPEED AND COMFORT.

TESTIMONIALS.

JERSEY CITY, N. J., Dec. 18th, 1889.

EAGLE BICYCLE MFG. Co., Stamford, Conn.

Dear Sirs:—Since purchasing my EAGLE in the spring, I have found time to ride it about three thousand miles, and having now used it about the length of time that was allowed me to get tired of it in, by a numerous contingent of "croakers," my opinion of the wheel is best expressed by telling you that the same old "54" will carry me through next year. This will be the first time in a cycling experience of six years, that the same wheel has suited me for more than one season. It is generally conceded nowadays that the best wheel must be a "Safety" of some sort. The high wheel Safeties with lever motions have been found too complicated and too liable to get out of order, the low ones are too low and too much like hard work, therefore give me a wheel safe from headers, with a simple crank motion and no springs, and best of all extreme ease of running. If there has ever been a wheel made combining these essentials, THE EAGLE is certainly the identical machine.

With best wishes for your continued success,

I am, very truly yours,

W. E. ELDRIDGE.

NEWPORT, R. I., Dec, 19th, 1889.

EAGLE BICYCLE MFG. Co., Stamford, Conn.

Gentlemen:—I have now ridden my 52-inch EAGLE for about five months on all kinds of roads and on the track, and have never ridden a more staunch or easier running machine, and think there must be more speed in it than in other wheels, either Ordinary or Safety, as I have raced with both and never had the success with them that I have had with the regular 46 lb. EAGLE. Although there may be room for improvement, yet I think it comes the nearest to being built right of any machine on the market. On the three machines I use I never broke anything except three pedal pins, which I am liable to push off on any machine, as they did not break from falling. I also had a spoke broken when a 125 lb. trunk fell on the wheel in a baggage car.

Yours truly,

WM. VAN WAGONER, R. I. Champion.

NORTHAMPTON, MASS., Dec. 20th, 1889.

EAGLE BICYCLE MFG. CO.

Gentlemen :—Thinking you may be interested to know what your wheels are doing, I write to give you my figures for the season's riding.

Since Jan. 1st last, I have ridden on 286 days, with a total mileage of 3,107, besides 258 on Tandem Safety, in all 3,365 miles.

Have been riding since June, 1880, and this beats any of my other years' records by 350 miles. Why? Well, because I have ridden an EAGLE since about the middle of June. In my nine years riding I have ridden nearly everything in the wheel line, from an Extraordinary Challenge to a Kangaroo, and never till this season have I had a machine which suited me as completely as the EAGLE.

My longest ride this season was from here to Bristol Ferry, R. I., 128 miles in 14¾ hours, including all stops and carrying 10 lbs. of baggage. Have made several runs of 50 miles and over.

All those who ride EAGLES here consider it as near perfect as a wheel can be and very easy to control, and that the awful bugbear of a pedal mount is entirely a myth.

Wishing you and THE EAGLE all possible success in the coming season, I remain,

Most respectfully yours,

E. E. DAVIS.

MEMPHIS, TENN., Dec. 18th, 1889.

THE EAGLE BICYCLE MFG. CO., Stamford, Conn.

Gentlemen :—In reply to yours of recent date asking me what I thought of THE EAGLE after my year's trial, would say that I am more than satisfied. When I sold my Ordinary my friends all told me that I had made a mistake, and would find THE EAGLE impracticable, and would often sigh for the old wheel. This, however, has not been the case, as I have found it to be one of the best all around road wheels that I have ever seen. I have on two occasions this season demonstrated its value as a racing wheel, as I have won a 50 and also a 100 mile road race. My time in the 100 mile race was 8 hours and 11 minutes. I have also ridden 5 miles in 18 minutes on the road and a hilly road it was, too. In climbing hills I had some trouble at first, but now have learned to climb hills that I never was able to climb on an Ordinary.

I can ride it hands off as far and as fast as I can turn the pedals, and can climb hills hands off much better than I could on an Ordinary.

I have been practicing lately riding one wheel, and succeeded this morning in riding over half a mile on one wheel. I think that with a little more practice I will be able to ride anywhere I wish to on one wheel.

I have ridden THE EAGLE now for over eight months, and am better pleased than I thought I ever would be with a wheel, and that is saying a good deal.

Yours very truly,

T. J. DEUPREE, JR.

WINSTED, CONN., Dec. 16th, 1889.

EAGLE BICYCLE MFG. CO., Stamford, Conn.

Gents :—Perhaps it will not be displeasing to you to know my opinion of THE EAGLE. In the language of man, it is a "dandy." Your claims as to the merits of your machine are large, but in my opinion, you don't claim enough for it. The wheel has exceeded my most sanguine expectations; is a good hill climber and just the wheel to plough through sand with. I wish every man who rides a Safety (Rover Type), would trundle his machine to the top of some unridable hill, then do the same with an EAGLE. The Safety man would think he had a "feather on wings" the second trip, comparatively speaking.

I have ridden nearly all kinds of bicycles within the past few years, and of them all I recommend THE EAGLE as the best, *all things considered.*

Yours respectfully,

GEORGE B. WOODRUFF,

Sec. and Treas. Winsted Wheel Club.

AVON, CONN., Dec. 19th, 1889.

THE EAGLE BICYCLE MFG. CO., Stamford, Conn.

Dear Sirs :—I have used my EAGLE almost exclusively this season, and have found it very satisfactory in every respect. I ride almost daily over very rough and steep roads, so that before I used THE EAGLE I thought it necessary to keep two machines, so that I could always have one out of the repair shop. Since adopting THE EAGLE, I have not been obliged to lose a single trip for repairs, and I cannot see that it shows any signs of wear or weakness, except the natural wear of the tires.

Yours truly,

GEORGE A. SAUNDERS.

WASHINGTON, D. C., Dec. 17th, 1889.

EAGLE BICYCLE MFG. CO., Stamford, Conn.

Gentlemen :—I take great pleasure in informing you that my experience in riding THE EAGLE bicycle has been in every respect most satisfactory. This is due to the accuracy of workmanship, the lightness of the machine and the position of the rider.

I am more and more pleased with the machine each day, and am taken back to my old days when I could not get enough riding.

You seemed to have looked after every comfort of the rider regardless of the cost of manufacture.

Heretofore I have had to have my machines built especially strong, so as to stand the rough use I put them to, but the wheel you took out of your regular stock for me, has lasted much better than any I have yet ridden and I have used your make much harder.

My breaking the many road records around here on THE EAGLE, after only having ridden it four months, shows what the machine is capable of when it is known that I have tried for the same records before on other machines, while on THE EAGLE it was mere child's play.

Wishing you the success you deserve, I remain,

Yours very truly, WM. T. ROBERTSON.

NEW YORK CITY, N. Y., Dec. 21st, 1889.

THE EAGLE BICYCLE CO., Stamford, Conn.

Gentlemen :—I have ridden an EAGLE since last spring and have given it a thorough trial, both as to its speed and general all around work, and I must say that it has given me entire satisfaction. Those of my friends who were doubtful as to its worth are gradually having their eyes opened, and I expect by spring to see a great many of them astride of a "Bird."

Wishing you every success, I am, Yours truly, A. P. FOLK.

ST. LOUIS, MO., Dec. 18th, 1889.

EAGLE BICYCLE MFG. CO., Stamford, Conn.

Gentlemen :—In regard to your great American Emblem, I report as follows: In May last, while puzzling over the purchase of a first-class bicycle for my own use, I chanced to see THE EAGLE, and after giving it a careful examination, with considerable hesitancy and not without some doubt as to its practicability, purchased one principally on account of its safety qualities. I have since given the wheel some very severe tests over all sorts of country roads and paved streets, and am now pleased to say that I consider THE EAGLE superior to any other first-class bicycle in the market, combining as it does speed, limited only by the rider, the more advantageous manner of applying power on account of the rider being directly over his work, durability and safety features, which enables a person to ride with a feeling of comfort and perfect security. I believe that whoever will give THE EAGLE a fair and impartial trial, must admit that it is *The Wheel.*

Very respectfully, F. B. RICHMOND.

WINSTED, CONN., Dec. 23d, 1889.

TO EAGLE BICYCLE MFG. CO., Stamford, Conn.

Gentlemen :—I have been riding one of your wheels for nearly six months, which is, I think, long enough to be able to judge of its merits, and I am heartily pleased with the work I have done on it. After three months riding I mounted a hill three times in succession with it, which I had been unable to conquer for nearly a year with the machine I formerly rode. Its bearings are excellent, and I find it very easy to ride almost any distance without hands.

Respectfully,

WILBUR H. BRADFORD, Captain Winsted Wheel Club.

NEW HAVEN, CONN., Dec. 20th, 1889.

THE EAGLE BICYCLE MFG. CO., Stamford, Conn.

Gentlemen :—After riding THE EAGLE for a season, I am happy to say, I find it a most satisfactory wheel. Its wearing qualities and finish are of the best, while it is rightly called, as it is sometimes termed a "Safety." I have yet to find an easier running wheel than THE EAGLE. I practically make a Unicycle of it.

Very truly yours, E. A. LEOPOLD.

GRAYVILLE, ILL., Dec. 20th, 1889.

EAGLE BICYCLE CO., Stamford, Conn.

Gentlemen :—I have now been using THE EAGLE for nearly five months, and must say, after a most thorough trial, that it very nearly approaches the "Ideal Bicycle." I have never for a moment regretted changing my mount, and would not go back to the "Ordinary" on any consideration. I believe it is the easiest running wheel in the world, over any kind of road—smooth or rough. It has not given me a fall from the very first, and I have ridden over places where no Ordinary could go. Give me THE EAGLE every time.

Hoping you will have a successful season, I remain,

Yours very truly, T. J. MATHEWS.

CHERRY HILL, N. J., Dec. 21st, 1889.

THE EAGLE BICYCLE MFG. Co., Stamford, Conn.

Gentlemen :—During the last four months I have been riding an EAGLE, and have given the machine some very severe tests on all kind of roads, and have found it to be far ahead of any wheel on the market.

I am an old rider and have ridden every style of wheel, but have never ridden a machine as easy running, fast and thoroughly practical as is THE EAGLE.

The workmanship and finish of the wheel is not surpassed by anything on the market.

I am confident that THE EAGLE is the coming wheel, as all old riders who have given it a thorough trial have become enthusiastic over it.

Respectfully,

H. P. STONEY,

Second Lieut. Englewood Wheelmen.

SACRAMENTO, CAL., Dec. 23d, 1889.

TO THE EAGLE BICYCLE MFG. Co., Stamford, Conn.

Gentlemen :—I have now ridden THE EAGLE for one season, and have given it a severe test over all kind of roads and find that it far exceeds all other wheels I have ever ridden in every respect, and I think all who have gtven the wheel a thorough test will fully agree with me.

Yours truly,

H. G. TOLL.

TONAWANDA, N. Y., Jan. 4th, 1890.

THE EAGLE BICYCLE MFG. Co., Stamford, Conn.

Gentlemen :—After riding THE EAGLE since last August, I can honestly say that it is in my estimation the most practical wheel in the market. There certainly is not another wheel that can approach it in ease of running. It is a splendid hill climber. It took me some time to find that out, but now I can do much better work on hills than I could on an Ordinary.

Wishing you every success with THE EAGLE, I remain,

Sincerely yours,

W. C. ACHILLES.

STRATFORD, ONT., Dec. 16th, 1889.

THE EAGLE BICYCLE MFG. Co., Stamford, Conn.

Gentlemen :—I have ridden Safeties, nearly all kinds of Ordinaries and two makes of lever wheels, and have sold them all, and now ride THE EAGLE 52-inch B finish, the best extant.

In my opinion, THE EAGLE is as much superior to any make of wheel that I have ever ridden as the sun is to the moon in its power of giving light.

I have ridden my EAGLE almost every day from the latter part of June until the middle of November, on all sorts of roads and a few times on the track, and won two valuable gold medals. Have tried other makes in races and could never even get a place. I have ridden it a hundred miles over rough roads at a faster rate than eight miles an hour without a lantern, in the dark, and thus far have never received the slightest injury.

I consider THE EAGLE is the most perfect piece of bicycle mechanism manufactured at the present day.

I ordered my EAGLE after reading your catalogue thoroughly. Although I thought the principle was right I had some doubts about the little wheel until I had seen and tried it. Now I am convinced that THE EAGLE is all you claim for it and more. It far exceeds what I anticipated.

Wishing you great success, as your wheel merits it, I remain,

Yours very truly,

W. NORRIE ROBERTSON, M. D.,

Box 382, Stratford, Ont.

BRIDGEPORT, CONN., Dec. 17th, 1889.

THE EAGLE BICYCLE MFG. Co., Stamford, Conn.

Dear Sirs :—I received my EAGLE in September, and immediately set to work in giving it the most severe tests. After becoming used to its motion, I tried it up hills, and it went up splendidly, the large wheel being in a frame keeps it perfectly steady, then you being directly over the center and with nothing to drag after, you can use all your weight and power to the best advantage.

Its coasting qualities are perfect, your position graceful and safe. I would not be afraid to coast any hill on THE EAGLE.

It runs easier than any wheel I was ever on, and for both track and ordinary use it is superior to any bicycle in my estimation in the market.

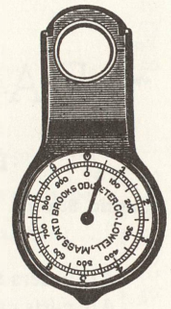
Wishing you every success, I remain,

Yours respectfully,

H. J. LEBING.

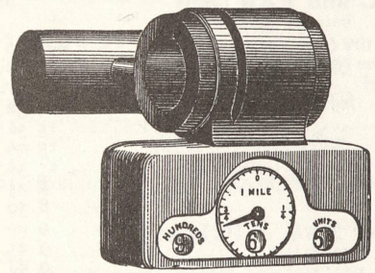
THE BROOKS IDEAL CYCLOMETER.

Small, Light, Neat, Compact, Accurate and Cheap.



This instrument is specially designed to meet the demand for a strictly first-class cyclometer at a moderate cost. In the simplicity of its construction, and in the directness and certainty of operation it is unrivalled by any cyclometer made. Being entirely without weights or springs and its few parts being always in gear, it is the least likely to get out of order. Its weight is 11 ounces, about one-half that of other direct acting cyclometers. The dial, which is the size of an ordinary watch dial, records miles and tenths to 1,000 before repeating, reading up to 10 miles by means of the small stationary pointer, and 10 miles for every space moved over by the hand. Sent highly polished and nickeled, postpaid to any address.

Price, - - - - - - - - - - $5.00.



THE BUTCHER CYCLOMETER.

The Best in the World.

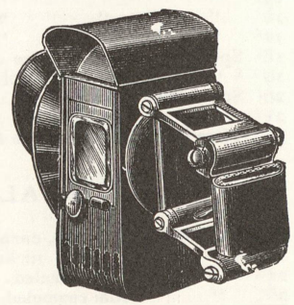
This cyclometer has so long been a favorite among wheelmen, and is so well-known, that any extended description of it is unnecessary. It will be sent postpaid to any address.

Price, - - $10.00.

THE KING OF THE ROAD, No. 250.

New and improved design for this season, constructed with new anti-vibrating back, new burner, and extra large reservoir for holding ten hours oil supply.

This lamp is considered the best on the market, and is especially adapted for THE EAGLE. Size of glass, $4\frac{1}{2}$x$3\frac{1}{2}$ inches



	Japanned	Nickeled
Price, - -	**$6.50**	**$8.00**

Bracket for attaching to steering-rod, $1

THE PERFECT POCKET OILER.

This oiler consists of a tube for holding the oil, fitted at the top with a patented tip which can be unscrewed to refill the oil. This tip throws only a small quantity at a time, and prevents all spilling and waste of oil. The shape and nickel finish make it the handsomest, neatest, and most convenient oiler in use.

Price, - - - - - - - 50 Cents Each.

PRICE LIST OF PARTS

OF THE

EAGLE BICYCLE.

THE EAGLE BICYCLE MFG. CO.

Atlantic Street, - - - - - - - - STAMFORD, CONN.

All orders should be addressed to the Stamford office.

All parts can be replaced without filing. In ordering, give the numbers to avoid mistakes.

LARGE WHEEL and PARTS.

No.		
1	Large Wheel complete, Full Nickel with tire (give size)	$45 00
2	" " " Enameled with tire (give size)	40 00
3	" " Hub nickel, for 48 in. wheel	14 50
4	" " " " " 50 in. "	14 50
5	" " " " " 52 in. "	15 50
6	" " " " " 54 in. "	15 00
7	" " " " " 56 in. "	15 50
8	" " Rim enameled, " 48 in. "	8 25
9	" " " " " 50 in. "	8 50
10	" " " " " 52 in. "	9 00
11	" " " " " 54 in. "	9 25
12	" " " " " 56 in. "	9 50
13	" " Rim nickel, " 48 in. "	9 25
14	" " " " " 50 in. "	9 50
15	" " " " " 52 in. "	10 00
16	" " " " " 54 in. "	10 25
17	" " " " " 56 in. "	10 50
18	Spoke, enameled (give size of wheel)	15
19	" nickeled (give size of wheel)	20
20	Spoke Nipple, enameled	05
21	" " nickeled	08
22	Tires for large wheels (rise 25 cts. per size), 48 in. wheel	6 75

SMALL WHEEL PARTS.

No.		
23	Small Wheel complete, enameled, with tire and ball bearings (give size)	$20 00
24	" " " nickeled, with tire and ball bearings (give size)	22 00
25	" " Hub nickeled	8 25
26	" " Rim enameled, 20 in	3 25
27	" " " " 22 in	3 75
28	" " " " 24 in	4 25
29	" " " nickeled, 20 in	4 25
30	" " " " 22 in	4 75
32	Spoke, enameled (give size of wheel)	10
33	" nickeled (give size of wheel)	12
34	Spoke Nipples, enameled	05
35	" " nickeled	08
36	Small wheel axle, nickeled	1 00
37	Right axle cone, with fixed pin	50
38	Left axle cone	50
39	Cap to end of hub, nickeled	40

No.		
40	Axle nut, nickel	$ 10
41	Spring dust guard	20
42	Spring dust guard screw	10
43	Felt washers, per dox	25
44	Steel balls	08
45	Rubber tire (give size of wheel), for 22 in. wheel	2 50

FRAME PARTS.

No.		
46	Steering rod, enameled, with forks and brackets for swivels (rise 50 cts. per size), for 48 in. wheel	$30 00
47	Steering rod, nickeled, with forks and brackets for swivels (rise 50 cts. per size), for 48 in. wheel	32 00
48	Tubular brace from steering rod to hub, enameled (give size of machine)	3 50
49	" " " " " " nickeled " " " "	3 75
50	Front solid frame rod, enameled	1 00
51	" " " " nickeled	1 50
52	Rear solid frame rod, enameled	1 00
53	" " " " nickeled	1 50
54	Long saddle spring, nickeled	3 75
55	Case hardened cone swivel, nickeled	1 00
56	" " step	30
57	" " screw plug, nickeled	40
58	Screw plug jam nut, nickeled	12
59	Cross bolt at lower swivel, nickeled	20
60	" " nut, nickeled	10
61	" " at upper swivel, nickeled	25
62	" " nut, nickeled	10
63	" " at rear of saddle spring	25
64	" " nut, nickeled	10
65	Jam nuts for inner ends of frame rods, nickeled	12

HANDLE BAR and BRAKE PARTS.

No.		
66	Handle bars complete, nickeled. with rubber grips and bracket	$ 6 00
67	Handle bars, nickeled, with bracket	4 50
68	Pear shaped rubber grips, each	75
69	Inside plug	15
70	Securing bolt, nickeled	25
71	Curved washer, nickeled	20
72	Break lever, nickeled	2 00
73	" " bolt, nickeled	15
74	" " " nut, nickeled	10
75	Fibre washers, each	03
76	Nut on end of break lever, nickeled	10
77	Adjustable connecting rod complete, nickeled	1 00
78	Upper portion of same, nickeled	60
79	Screw rod, nickeled	40
80	Screw rod jam nut, nickeled	10
81	Brake spoon and arm, nickeled	2 00
82	" " pivot, nickeled	20
83	" " spring	30
84	" " screws, each	10
85	Screw for end of handle	10

BALL BEARING PARTS.

86	Ball bearings for large wheel complete, nickeled, per pair	$12 00
87	Ball bearing cases, nickeled	2 75
88	Adjusting cones, each	1 00
89	" " clamp	30
90	" " screw	05
91	Oil dust guard	05
92	Oil dust guard screw	05

No.		
93	Axle collar	$ 50
94	" " pin	05
95	Hardened steel balls, each	08

CRANK and PEDAL PARTS.

96	Cranks, nickeled, each	$ 1 75
97	Crank pin, nickeled	25
98	" " nut, nickeled	10
99	Pedals complete, nickeled, per pair	10 00
100	Pedal ends, outside nickeled	1 00
101	" " inside "	1 00
102	" spindle, nickeled	1 50
103	" " cone	40
104	" " " nut, nickeled	10
105	" " " " washer, nickeled	10
106	" " inside nut, nickeled	15
107	" " inside nut washer, nickeled	10
108	" Rubbers, each	40
109	" " outer rod, nickeled	30
110	" " " " nut, nickeled	10
111	" " inner rod, nickeled	20
112	Hardened steel balls, each	08

SADDLE PARTS.

113	Saddle complete, with all attachments, nickeled	$ 7 00
114	Leather with rear form, loop and ring	2 75
115	Front spring, nickeled	1 50
116	Rear springs, each (state right or left), nickeled	1 00
117	Front lower clamp, nickeled	1 00
118	" " " bolts, each, nickeled	20
119	" " " bolt nut, nickeled	10
120	Rear lower clamp, nickeled	30
121	" " " eye bolt, nickeled	10
122	" " " " " nut, nickeled	10
123	Upper clamps, each, nickeled	20
124	Eye bolts for attaching rear of saddle to springs, each, nickeled	10
125	Eye bolt nuts, each, nickeled	10

MISCELLANEOUS PRICE LIST.

Butcher Cyclometer	$10 00
Brooks Hub Cyclometer, nickeled	5 00
King of the Road Head Lamp, with non-vibrator, japanned	6 50
" " " " " " " nickeled	8 00
The Eagle Saddle complete, nickeled, with all attachments	7 00
Perfection Bicycle Lock, nickeled	1 00
The Eagle Luggage-carrier, nickeled	1 00
Perfection Alarm	2 50
The Duplex Whistle, nickeled	25
Springfield Single Tube Whistle, nickeled	25
Eagle Tool Bag	1 00
Enamel, per bottle	50
Rankin's Patent Toe Clip, per pair	50
Cement (for securing tire), per cake	25
Cement (for securing tire), per lb	1 00
Cement (for mending cuts), per bottle	50
B. & S. Pocket Wrench, blued	75
B. & S. Pocket Wrench, nickeled	1 00
Nipple Grip, nickeled	1 00
Bracket for Head Lamp, nickeled	1 00
Cabinet Photo. of the Eagle	15
Double Foot Rest for Steering Rod	1 00

All orders for parts or sundries should be addressed to the central office at Stamford, Conn., and must be accompanied with CASH, as we cannot open any small accounts.

TELEGRAPH CODE.

ABBY—Ship at once by freight.
ACTOR—Ship at once by express.
ACORN—Ship at once by express, C. O. D.
ABOUT—Send by mail.
HOME—Send a supply of catalogues with order.
HOUSE—Answer by wire.
HANDLE—Answer by mail.
BUST—Shall we ship?
BUGLE—How soon can you ship?
BUTTON—Have you shipped?
BEAD—Have you received?
BAKER—We have in stock.
BONES—We have shipped by freight.
BREAD—We have shipped by express.
BELT—Have written you to-day.
BERTH—Have sent you by mail.
CHEST—Will ship at once as directed.
CARD—Expect to be at your place.
CLOCK—Machine has not yet arrived.
BURN.....46 inch A.
BARREL.....46 inch B.
CAT.....48 inch A.
COLD.....48 inch B.
COMMON.....48 inch C.
DEEP.....50 inch A.
DELIGHT.....50 inch B.
DEMAND.....50 inch C.
EAT.....52 inch A.
ELATE.....52 inch B.
ENTRY.....52 inch C.
FOX.....54 inch A.
FORM.....54 inch B.
FINAL.....54 inch C.
GRAND.....56 inch A.
GARDEN.....56 inch B.
GAS.....56 inch C.
HANDSOME—Spokes enameled, No. 18.
HOLLOW—Spokes enameled, No. 32.
HUNT—Spokes nickeled, No. 19.
HERO—Spokes nickeled, No. 33.
JUNE—Spoke Nipples enameled, No. 20.
JEWEL—Spoke Nipples nickeled, No. 21.
KNOW—Inside Plug, No. 69.
KIND—Securing Bolt, No. 70.
WILLOW—Curved Washer, No. 71.
LADLE—Crank, No. 76.
LARGE—Crank Pin, No. 97.
LATE—Crank Pin Nut, No. 98.
MEADOW—Pedal Spindle, No. 102.
MAYOR—Pedal Spindle, Inside Nut, No. 106.
MOTIVE—Pedal Spindle, Inside Nut Washer, No. 107.
SAND—Rear Lower Clamp Eye and Nut for Saddle, Nos. 121 and 122.

Other parts may be designated by regular numbers.

Gillespie Bros,, Printers, Stamford, Conn.